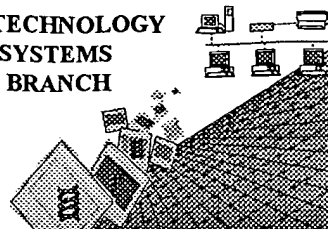


BIOTECHNOLOGY  
SYSTEMS  
BRANCH



# RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/032,438  
Source: OIPK  
Date Processed by STIC: 3/24/2003

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PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
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OIPE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/032,438

DATE: 03/24/2003

TIME: 13:19:43

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

1 <110> APPLICANT: Hurley, David L. Hurley  
 3 <120> TITLE OF INVENTION: Growth hormone transcription factor  
 5 <130> FILE REFERENCE: DLH16000  
 C--> 7 <140> CURRENT APPLICATION NUMBER: US/10/032,438  
 C--> 7 <141> CURRENT FILING DATE: 2001-12-31  
 7 <150> PRIOR APPLICATION NUMBER: US 60/258,237  
 8 <151> PRIOR FILING DATE: 2000-12-25  
 10 <160> NUMBER OF SEQ ID NOS: 2  
 12 <170> SOFTWARE: Microsoft Word for the Macintosh 2001

## ERRORED SEQUENCES

14 <210> SEQ ID NO: 1  
 15 <211> LENGTH: 6879  
 16 <212> TYPE: DNA  
 17 <213> ORGANISM: Mus musculus  
 19 <400> SEQUENCE: 1

E--> 20 atg tta tac aac cag cca gac cag aaa tat gat gaa gag aat ctt cca ata cca aat tct  
 21 60  
 22 Met Leu Tyr Asn Gln Pro Asp Gln Lys Tyr Asp Glu Glu Asn Leu Pro Ile Pro Asn Ser  
 23 1 5 10 15 20  
 E--> 26 cta cgt tgt gag ctc tta ctt gtt ttg aaa act cag tgg ccc ttt gat cca gaa ttt tgg  
 27 120  
 28 Leu Arg Cys Glu Leu Leu Leu Val Leu Lys Thr Gln Trp Pro Phe Asp Pro Glu Phe Trp  
 29 25 30 35 40  
 E--> 32 gat tgg aaa act ttg aag cgc cag tgt ctt gct ctc atg gga gaa gag gcg tct att gtc  
 33 180  
 34 Asp Trp Lys Thr Leu Lys Arg Gln Cys Leu Ala Leu Met Gly Glu Glu Ala Ser Ile Val  
 35 45 50 55 60  
 E--> 38 tcc tca att gat gaa ctg aat gac agt gaa gtc tat gag aaa gta gac tac cag ggt gaa  
 39 240  
 40 Ser Ser Ile Asp Glu Leu Asn Asp Ser Glu Val Tyr Glu Lys Val Asp Tyr Gln Gly Glu  
 41 65 70 75 80  
 E--> 44 agg gga gac aca tct gtg aat ggc ctt tct gct gct gga ctt ggt act gat tct ggc ctg  
 45 300  
 46 Arg Gly Asp Thr Ser Val Asn Gly Leu Ser Ala Ala Gly Leu Gly Thr Asp Ser Gly Leu  
 47 85 90 95 100  
 E--> 50 ctg atg gat act ggt gat gaa aag cag aag aag aaa gag ata aaa gaa tta aaa gat agg  
 51 360  
 52 Leu Met Asp Thr Gly Asp Glu Lys Gln Lys Lys Lys Glu Ile Lys Glu Leu Lys Asp Arg  
 53 105 110 115 120  
 E--> 56 ggg ttt ata tct gct agg ttt agg aat tgg caa gcc tac atg cag tat tgt ttg ctc tgt

see p 1-16

error throughout

Please

consult  
sequence rules for  
valid format.Does Not Comply  
Corrected Diskette NeededPer 1.822 d  
sequence rules, a MAXIMUM of 16 codons  
per line allowed.insert cumulative  
base total at right  
margin  
and  
then  
insert  
a  
hard  
return

edit

these  
per  
above

Instructions

## RAW SEQUENCE LISTING

DATE: 03/24/2003

PATENT APPLICATION: US/10/032,438

TIME: 13:19:43

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

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57 420
58 Gly Phe Ile Ser Ala Arg Phe Arg Asn Trp Gln Ala Tyr Met Gln Tyr Cys Leu Leu Cys
59                               125                               130                               135                               140
E--> 62 gac aaa gaa ttc ctt gga cac aga ata gta cgg cat gct caa aaa cat tac aaa gat ggg
63 480
64 Asp Lys Glu Phe Leu Gly His Arg Ile Val Arg His Ala Gln Lys His Tyr Lys Asp Gly
65                               145                               150                               155                               160
E--> 68 att tac agc tgt ccc ata tgt gca aag aat ttt aat tct aaa gac tcg ttt gtc cct cat
69 540
70 Ile Tyr Ser Cys Pro Ile Cys Ala Lys Asn Phe Asn Ser Lys Asp Ser Phe Val Pro His
71                               165                               170                               175                               180
E--> 74 gtt acc ctg cat gtt aaa cag tct agt aaa gag aga cta gca gct atg aag cca tta aga
75 600
76 Val Thr Leu His Val Lys Gln Ser Ser Lys Glu Arg Leu Ala Ala Met Lys Pro Leu Arg
77                               185                               190                               195                               200
E--> 80 aga ttg gga agg cct cct aaa atc aca gcc acc cat gaa aat caa aag act aat att aat
81 660
82 Arg Leu Gly Arg Pro Pro Lys Ile Thr Ala Thr His Glu Asn Gln Lys Thr Asn Ile Asn
83                               205                               210                               215                               220
E--> 86 act gtg gct aaa cag gaa cag cga ccc ata aaa aag aat agt ctt tat tca aca gat ttc
87 720
88 Thr Val Ala Lys Gln Glu Gln Arg Pro Ile Lys Lys Asn Ser Leu Tyr Ser Thr Asp Phe
89                               225                               230                               235                               240
E--> 92 ata gtg ttt aat gac aac gat ggt tca gat gat gaa aat gac gac aag gac aag tct tat
93 780
94 Ile Val Phe Asn Asp Asn Asp Gly Ser Asp Asp Glu Asn Asp Asp Lys Asp Lys Ser Tyr
95                               245                               250                               255                               260
E--> 98 gag ccc gag gtg atc cct gtc cag aaa cca gta cct gtt aat gag ttt aat tgt cct gtg
99 840
100 Glu Pro Glu Val Ile Pro Val Gln Lys Pro Val Pro Val Asn Glu Phe Asn Cys Pro Val
101                               265                               270                               275                               280
E--> 104 acc ttt tgt aaa aag ggc ttt aag tac ttc aaa aat tta att gct cat gtg aaa ggc cat
105 900
106 Thr Phe Cys Lys Lys Gly Phe Lys Tyr Phe Lys Asn Leu Ile Ala His Val Lys Gly His
107                               285                               290                               295                               300
E--> 110 aag gat agt gaa gat gcc aaa cgc ttt ctt gaa atg caa agc aag aaa gtc att tgc cag
111 960
112 Lys Asp Ser Glu Asp Ala Lys Arg Phe Leu Glu Met Gln Ser Lys Lys Val Ile Cys Gln
113                               305                               310                               315                               320
E--> 116 tac tgt aga agg cac ttt gta agc gtc act cat ctc aat gat cac tta caa atg cac tgt
117 1020
118 Tyr Cys Arg Arg His Phe Val Ser Val Thr His Leu Asn Asp His Leu Gln Met His Cys
119                               325                               330                               335                               340
E--> 122 ggc agt aag cca tat ata tgt ata cag atg aaa tgt aag gct ggt ttt aat agt tac gca
123 1080
124 Gly Ser Lys Pro Tyr Ile Cys Ile Gln Met Lys Cys Lys Ala Gly Phe Asn Ser Tyr Ala
125                               345                               350                               355                               360
E--> 128 gag ctg tta gcc cac cga aag gag cat caa gtc ttt aga gca aag tgc tta ttt cca aaa
129 1140

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*edit above*

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Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

```

130 Glu Leu Leu Ala His Arg Lys Glu His Gln Val Phe Arg Ala Lys Cys Leu Phe Pro Lys
131                               365                               370                               375                               380
E--> 134 tgt ggc aga att ttt tcc caa gct tat tta ctg tat gat cat gag gcc caa cat tat aat
E--> 135 3200
136 Cys Gly Arg Ile Phe Ser Gln Ala Tyr Leu Leu Tyr Asp His Glu Ala Gln His Tyr Asn
137                               385                               390                               395                               400
E--> 140 acg tac acg tgc aag ttc aca ggt tgt ggt aag gtg tac cgt tct cag agc gag atg gag
141 1260
142 Thr Tyr Thr Cys Lys Phe Thr Gly Cys Gly Lys Val Tyr Arg Ser Gln Ser Glu Met Glu
143                               405                               410                               415                               420
E--> 146 aag cac cag gat ggc cac agt cat cct gaa aca ggg ctg cct cct gaa gac cag ctt cag
147 1320
148 Lys His Gln Asp Gly His Ser His Pro Glu Thr Gly Leu Pro Pro Glu Asp Gln Leu Gln
149                               425                               430                               435                               440
E--> 152 cca tct gga aat gat gtg aat ccg gac tca gga gcg acg gct gca gga gga agg tcc gag
153 1380
154 Pro Ser Gly Asn Asp Val Asn Pro Asp Ser Gly Ala Thr Ala Ala Gly Gly Arg Ser Glu
155                               445                               450                               455                               460
E--> 158 aac agc att gac aag aac ctg ggt tca aac aga agt gca gat tgg gag aaa aac aga gca
159 1440
160 Asn Ser Ile Asp Lys Asn Leu Gly Ser Asn Arg Ser Ala Asp Trp Glu Lys Asn Arg Ala
161                               465                               470                               475                               480
E--> 164 gag cca gct gtg act aaa cac ggc cag atc tct gcc gct gaa ctc agg caa gct aac ata
165 1500
166 Glu Pro Ala Val Thr Lys His Gly Gln Ile Ser Ala Ala Glu Leu Arg Gln Ala Asn Ile
167                               485                               490                               495                               500
E--> 170 cca ttg tca aat ggt ctg gaa acc cgt gat aat act act gtt ctt cgg acc aat gaa gta
171 1560
172 Pro Leu Ser Asn Gly Leu Glu Thr Arg Asp Asn Thr Thr Val Leu Arg Thr Asn Glu Val
173                               505                               510                               515                               520
E--> 176 gct gtg tcc atc aag gtg tct gtc aac cat ggg gta gag ggt gac ttt gga aag caa gaa
177 1620
178 Ala Val Ser Ile Lys Val Ser Val Asn His Gly Val Glu Gly Asp Phe Gly Lys Gln Glu
179                               525                               530                               535                               540
E--> 182 aac cta acc atg gaa ggc act ggt gag ccg ctg atc aca gat gtg cat aaa cca ggt ata
183 1680
184 Asn Leu Thr Met Glu Gly Thr Gly Glu Pro Leu Ile Thr Asp Val His Lys Pro Gly Ile
185                               545                               550                               555                               560
E--> 188 ggt gct ggg gtc cag tta tgt cat cca ggt ttc caa gaa aag aaa ggt cac gag tgc ctg
189 1740
190 Gly Ala Gly Val Gln Leu Cys His Pro Gly Phe Gln Glu Lys Lys Gly His Glu Cys Leu
191                               565                               570                               575                               580
E--> 194 aac gaa gcc cag aat tct tta tca aac tca gaa tca ctg aag atg gat gac ctt aac cca
195 1800
196 Asn Glu Ala Gln Asn Ser Leu Ser Asn Ser Glu Ser Leu Lys Met Asp Asp Leu Asn Pro
197                               585                               590                               595                               600
E--> 200 caa agc tta gaa aga cag gtg aac act ctg atg acc ttt tct gta caa aat gag gca gga
201 1860
202 Gln Ser Leu Glu Arg Gln Val Asn Thr Leu Met Thr Phe Ser Val Gln Asn Glu Ala Gly

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## RAW SEQUENCE LISTING

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DATE: 03/24/2003

TIME: 13:19:43

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

```

      203              605              610              615              620
E--> 206 ctt gaa gac aat tca caa att tgc aag ttt gaa tgt gga ggt gat gtt aaa acc tca tcc
      207 1920
      208 Leu Glu Asp Asn Ser Gln Ile Cys Lys Phe Glu Cys Gly Gly Asp Val Lys Thr Ser Ser
      209              625              630              635              640
E--> 212 agc ctt tat gat tta cct ctt aag aca cta gaa agt atc aca ttt gtt cag tca cag ccc
      213 1980
      214 Ser Leu Tyr Asp Leu Pro Leu Lys Thr Leu Glu Ser Ile Thr Phe Val Gln Ser Gln Pro
      215              645              650              655              660
E--> 218 gac cta agc agt ccg ttg gga tct cca tca gta cct cca aaa gct cca ggt cag aag ttc
      219 2040
      220 Asp Leu Ser Ser Pro Leu Gly Ser Pro Ser Val Pro Pro Lys Ala Pro Gly Gln Lys Phe
      221              665              670              675              680
E--> 224 agc tgc cag gtt gag gga tgc act cga aca tat aac tct tca cag agt att gga aaa cac
      225 2100
      226 Ser Cys Gln Val Glu Gly Cys Thr Arg Thr Tyr Asn Ser Ser Gln Ser Ile Gly Lys His
      227              685              690              695              700
E--> 230 atg aag aca gca cac cct gac caa tat gct gct ttt aaa ctg cag cgc aag acg aaa aaa
      231 2160
      232 Met Lys Thr Ala His Pro Asp Gln Tyr Ala Ala Phe Lys Leu Gln Arg Lys Thr Lys Lys
      233              705              710              715              720
E--> 236 ggt cag aaa tct aac aac tta aat aca cca aat cat gga aag tgt gtt tat ttt ttg cca
      237 2220
      238 Gly Gln Lys Ser Asn Asn Leu Asn Thr Pro Asn His Gly Lys Cys Val Tyr Phe Leu Pro
      239              725              730              735              740
E--> 242 tca caa gtg agc agc tct aat cat gct ttt ttt aca cca cag acc aaa gcc aat ggg aac
      243 2280
      244 Ser Gln Val Ser Ser Ser Asn His Ala Phe Phe Thr Pro Gln Thr Lys Ala Asn Gly Asn
      245              745              750              755              760
E--> 248 cct gcc tgt tca gcc cag gtg cag cat gtc tcg cct tcc att ttc cca gct cat tta gca
      249 2340
      250 Pro Ala Cys Ser Ala Gln Val Gln His Val Ser Pro Ser Ile Phe Pro Ala His Leu Ala
      251              765              770              775              780
E--> 254 agt gta tca gct cca ttg tta ccc tca gtg gaa agt gtc cta agt cca aat ata cct tct
      255 2400
      256 Ser Val Ser Ala Pro Leu Leu Pro Ser Val Glu Ser Val Leu Ser Pro Asn Ile Pro Ser
      257              785              790              795              800
E--> 260 cag gat aaa cat gga caa gat ggc ata tta tgt tca caa atg gaa aat ttg tct tat gct
      261 2460
      262 Gln Asp Lys His Gly Gln Asp Gly Ile Leu Cys Ser Gln Met Glu Asn Leu Ser Tyr Ala
      263              805              810              815              820
E--> 266 ccc ttg cca gca caa atg gaa gat cta acc aag aca gtt ttg cct ttg aat att gac agc
      267 2520
      268 Pro Leu Pro Ala Gln Met Glu Asp Leu Thr Lys Thr Val Leu Pro Leu Asn Ile Asp Ser
      269              825              830              835              840
E--> 272 ggc tca gat ccg ttt ctt cct tta ccc aca gaa aat agc tct ctc ttc tct tca cca gca
      273 2580
      274 Gly Ser Asp Pro Phe Leu Pro Leu Pro Thr Glu Asn Ser Ser Leu Phe Ser Ser Pro Ala
      275              845              850              855              860

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TIME: 13:19:43

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

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E--> 278 gac agt gag aat aat tct gtt ttt tcc caa ctg gaa aat agt aca aat cat tat ccc tcc
      279 2640
      280 Asp Ser Glu Asn Asn Ser Val Phe Ser Gln Leu Glu Asn Ser Thr Asn His Tyr Pro Ser
      281      865      870      875      880
E--> 284 cag acg gat gga aac ata aat tcc tct ttt ctg aaa gga ggc agc agt gaa aat gga gtt
      285 2700
      286 Gln Thr Asp Gly Asn Ile Asn Ser Ser Phe Leu Lys Gly Gly Ser Ser Glu Asn Gly Val
      287      885      890      895      900
E--> 290 ttt cct tcc caa gta agt tct gca gat gac ttc agt agc acc agt gcc caa ccg tct aca
      291 2760
      292 Phe Pro Ser Gln Val Ser Ser Ala Asp Asp Phe Ser Ser Thr Ser Ala Gln Pro Ser Thr
      293      905      910      915      920
E--> 296 cct aag aaa gtg aaa aaa gac cgt ggt cga ggc cca aat ggg aag gaa aga aaa ccc aag
      297 2820
      298 Pro Lys Lys Val Lys Lys Asp Arg Gly Arg Gly Pro Asn Gly Lys Glu Arg Lys Pro Lys
      299      925      930      935      940
E--> 302 cac aac aaa agg gct aaa tgg cct gcg att atc agg gat ggg aaa ttc atc tgt agc agg
      303 2880
      304 His Asn Lys Arg Ala Lys Trp Pro Ala Ile Ile Arg Asp Gly Lys Phe Ile Cys Ser Arg
      305      945      950      955      960
E--> 308 tgt tac agg gct ttc acc aac ccc agg tcc ctg ggt gga cac ctg tct aaa agg tct tac
      309 2940
      310 Cys Tyr Arg Ala Phe Thr Asn Pro Arg Ser Leu Gly Gly His Leu Ser Lys Arg Ser Tyr
      311      965      970      975      980
E--> 314 tgc aaa cca ctg gat gga gca gaa ata gca cag gaa ctt cta cag acc aac aga cag cct
      315 3000
      316 Cys Lys Pro Leu Asp Gly Ala Glu Ile Ala Gln Glu Leu Leu Gln Thr Asn Arg Gln Pro
      317      985      990      995      1000
E--> 320 tcc ctc cta gct agc atg att ctc tcc aca agt gca gta aat atg caa cag ccg caa cag
      321 3060
      322 Ser Leu Leu Ala Ser Met Ile Leu Ser Thr Ser Ala Val Asn Met Gln Gln Pro Gln Gln
      323      1005      1010      1015      1020
E--> 326 tct aac ttt aat cca gaa aca tgc ttt aaa gac cca tca ttc ctg caa ctt ctt aat gtg
      327 3120
      328 Ser Asn Phe Asn Pro Glu Thr Cys Phe Lys Asp Pro Ser Phe Leu Gln Leu Leu Asn Val
      329      1025      1030      1035      1040
E--> 332 gaa aat cgt cca acc ttt tta cca agt aca ttt cca aga tgt gac gtg agt aac ttt aat
      333 3180
      334 Glu Asn Arg Pro Thr Phe Leu Pro Ser Thr Phe Pro Arg Cys Asp Val Ser Asn Phe Asn
      335      1045      1050      1055      1060
E--> 338 gcc agt gtt agt cag gaa ggc agt gaa att att aag cag gct tta gaa act gct ggc att
      339 3240
      340 Ala Ser Val Ser Gln Glu Gly Ser Glu Ile Ile Lys Gln Ala Leu Glu Thr Ala Gly Ile
      341      1065      1070      1075      1080
E--> 344 ccc agc acg ttt gag agt gcc gaa atg ctt tct cag gtt gtt cca ata ggc agt gtc tcc
      345 3300
      346 Pro Ser Thr Phe Glu Ser Ala Glu Met Leu Ser Gln Val Val Pro Ile Gly Ser Val Ser
      347      1085      1090      1095      1100
E--> 350 gat gca gca caa gtc agt gca gcg ggg atg cca ggg cca cct gtg aca ccc ttg tta cag

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351 3360
352 Asp Ala Ala Gln Val Ser Ala Ala Gly Met Pro Gly Pro Pro Val Thr Pro Leu Leu Gln
353          1105          1110          1115          1120
E--> 356 act gtt tgc cac cca aac acc tca cca tca aac cag aat caa acg cca aat tcc aaa acc
E--> 357 34230
358 Thr Val Cys His Pro Asn Thr Ser Pro Ser Asn Gln Asn Gln Thr Pro Asn Ser Lys Thr
359          1125          1130          1135          1140
E--> 362 ctc aaa gaa tgt aac agt ttg cct ctc ttt aca aca aat gat tta ctg cta aag act att
363 3480
364 Leu Lys Glu Cys Asn Ser Leu Pro Leu Phe Thr Thr Asn Asp Leu Leu Leu Lys Thr Ile
365          1145          1150          1155          1160
E--> 368 gaa aat ggc ttg tgc tcc aat tca ttc agt agt tct act gaa cca cca caa aat ttt acc
369 3540
370 Glu Asn Gly Leu Cys Ser Asn Ser Phe Ser Ser Ser Thr Glu Pro Pro Gln Asn Phe Thr
371          1165          1170          1175          1180
E--> 374 aat aat agt gca cat gtt tct gtt ata agt ggg cct cag aat aca aga tcc agt cat ttg
375 3600
376 Asn Asn Ser Ala His Val Ser Val Ile Ser Gly Pro Gln Asn Thr Arg Ser Ser His Leu
377          1185          1190          1195          1200
E--> 380 aat aaa aaa gga aat agt gca tct aag aag aga aaa aaa gtt gct cct gca gta agt gta
381 3660
382 Asn Lys Lys Gly Asn Ser Ala Ser Lys Lys Arg Lys Lys Val Ala Pro Ala Val Ser Val
383          1205          1210          1215          1220
E--> 386 tct aat act tcc caa aat gtg cta cca act gat tta cca gtg ggc ctt cca tcg aag aat
387 3720
388 Ser Asn Thr Ser Gln Asn Val Leu Pro Thr Asp Leu Pro Val Gly Leu Pro Ser Lys Asn
389          1225          1230          1235          1240
E--> 392 ctt aca gtc cct gat acc aac aca cgg tca gac atg acc cca gat tgt gaa cct cgg gct
393 3780
394 Leu Thr Val Pro Asp Thr Asn Thr Arg Ser Asp Met Thr Pro Asp Cys Glu Pro Arg Ala
395          1245          1250          1255          1260
E--> 398 ttg gtg gaa aat ctc aca cag aaa tta aat aac att gac aat cat ttg ttt ata act gat
399 3840
400 Leu Val Glu Asn Leu Thr Gln Lys Leu Asn Asn Ile Asp Asn His Leu Phe Ile Thr Asp
401          1265          1270          1275          1280
E--> 404 gta aaa gag aac tgt aaa gcc agt ctt gag ccc cat aca atg tta acc cct tta aca tta
405 3900
406 Val Lys Glu Asn Cys Lys Ala Ser Leu Glu Pro His Thr Met Leu Thr Pro Leu Thr Leu
407          1285          1290          1295          1300
E--> 410 aaa acg gaa aac ggc gat tcc cga atg atg cct ttg agt tca tgc aca cca gtg aat tct
411 3960
412 Lys Thr Glu Asn Gly Asp Ser Arg Met Met Pro Leu Ser Ser Cys Thr Pro Val Asn Ser
413          1305          1310          1315          1320
E--> 416 gat ttg cag att tct gaa gat aat gtt att cag aac ttt gag aag act ctt gaa att att
417 4020
418 Asp Leu Gln Ile Ser Glu Asp Asn Val Ile Gln Asn Phe Glu Lys Thr Leu Glu Ile Ile
419          1325          1330          1335          1340
E--> 422 aaa act gct atg aat tct caa ata ctt gag gta aaa agt gga tct cag ggt act ggt gag
423 4080

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Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

```

424 Lys Thr Ala Met Asn Ser Gln Ile Leu Glu Val Lys Ser Gly Ser Gln Gly Thr Gly Glu
425                               1345                               1350                               1355                               1360
E--> 428 aca aca cag aat gct cag ata aat tac agc atg caa ctt ccc tca gta aac tct atc cca
429 4140
430 Thr Thr Gln Asn Ala Gln Ile Asn Tyr Ser Met Gln Leu Pro Ser Val Asn Ser Ile Pro
431                               1365                               1370                               1375                               1380
E--> 434 gat agc aag ctg cct gat gct tct cag tgc tcc tct ttc cta act gta atg cca aca aag
435 4200
436 Asp Ser Lys Leu Pro Asp Ala Ser Gln Cys Ser Ser Phe Leu Thr Val Met Pro Thr Lys
437                               1385                               1390                               1395                               1400
E--> 440 tct gaa gca tta cat aag gag gat caa ata cag gac att tta gag ggt ttg caa aac tta
441 4260
442 Ser Glu Ala Leu His Lys Glu Asp Gln Ile Gln Asp Ile Leu Glu Gly Leu Gln Asn Leu
443                               1405                               1410                               1415                               1420
E--> 446 aaa cta gaa aat gac act tct gct cca gct tcc cag agt atg cta atg aac aaa tca gta
447 4320
448 Lys Leu Glu Asn Asp Thr Ser Ala Pro Ala Ser Gln Ser Met Leu Met Asn Lys Ser Val
449                               1425                               1430                               1435                               1440
E--> 452 gca ctg tcc cct act cct act aaa tca act cca aat att gta gtc cag cca gta ccc gaa
453 4380
454 Ala Leu Ser Pro Thr Pro Thr Lys Ser Thr Pro Asn Ile Val Val Gln Pro Val Pro Glu
455                               1445                               1450                               1455                               1460
E--> 458 gtg ata cat gtt cag ctt aat gac aga gtt aat aag ccc ttt gtg tgt caa aac caa ggc
459 4440
460 Val Ile His Val Gln Leu Asn Asp Arg Val Asn Lys Pro Phe Val Cys Gln Asn Gln Gly
461                               1465                               1470                               1475                               1480
E--> 464 tgt aac tac agt gct atg aca aag gat gcc ctg ttt aaa cac tat ggt aaa atc cat cag
465 4500
466 Cys Asn Tyr Ser Ala Met Thr Lys Asp Ala Leu Phe Lys His Tyr Gly Lys Ile His Gln
467                               1485                               1490                               1495                               1500
E--> 470 tat act cca gag atg att ctt gaa att aag aag aat caa tta aaa ttt gct cca ttt aaa
471 4560
472 Tyr Thr Pro Glu Met Ile Leu Glu Ile Lys Lys Asn Gln Leu Lys Phe Ala Pro Phe Lys
473                               1505                               1510                               1515                               1520
E--> 476 tgt gta gta cct tca tgt acc aaa aca ttt aca aga aat tct aat ctc cgg gca cac tgt
477 4620
478 Cys Val Val Pro Ser Cys Thr Lys Thr Phe Thr Arg Asn Ser Asn Leu Arg Ala His Cys
479                               1525                               1530                               1535                               1540
E--> 482 cag ttg gtg cat cat ttt aca ata gaa gaa atg gta aag cta aaa ata aaa agg ccc tat
E--> 483 4620
484 Gln Leu Val His His Phe Thr Ile Glu Glu Met Val Lys Leu Lys Ile Lys Arg Pro Tyr
485                               1545                               1550                               1555                               1560
E--> 488 gga aga aaa tct cag agt gaa aat ttg tca tct cca cag aat aat caa gtg aag aaa cag
489 4740
490 Gly Arg Lys Ser Gln Ser Glu Asn Leu Ser Ser Pro Gln Asn Asn Gln Val Lys Lys Gln
491                               1565                               1570                               1575                               1580
E--> 494 cca tcc atg gcc gag gaa aca aaa act gag tca caa cca gcc ttc aag gta cca gca gca
495 4800
496 Pro Ser Met Ala Glu Glu Thr Lys Thr Glu Ser Gln Pro Ala Phe Lys Val Pro Ala Ala

```



## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/032,438

DATE: 03/24/2003

TIME: 13:19:43

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

```

497          1585          1590          1595          1600
E--> 500 aca ggt gat gct gca ctt gct aat gca aca gta atc cca gaa aaa caa ctt gca gaa aaa
501 4860
502 Thr Gly Asp Ala Ala Leu Ala Asn Ala Thr Val Ile Pro Glu Lys Gln Leu Ala Glu Lys
503          1605          1610          1615          1620
E--> 506 aaa agt cct gag aaa cca gaa agt tct tca cag cct gtc aca tct tct gct gaa caa tat
507 4920
508 Lys Ser Pro Glu Lys Pro Glu Ser Ser Ser Gln Pro Val Thr Ser Ser Ala Glu Gln Tyr
509          1625          1630          1635          1640
E--> 512 aat gca aat ctt gca aac cta aaa acc aaa gga agg aaa aat aag agg cat aga aaa gaa
513 4980
514 Asn Ala Asn Leu Ala Asn Leu Lys Thr Lys Gly Arg Lys Asn Lys Arg His Arg Lys Glu
515          1645          1650          1655          1660
E--> 518 aag gaa gaa aaa cgg gaa aag aat cca gtt tcc cag gcc ttt gaa ctt cca aca aaa tac
519 5040
520 Lys Glu Glu Lys Arg Glu Lys Asn Pro Val Ser Gln Ala Phe Glu Leu Pro Thr Lys Tyr
521          1665          1670          1675          1680
E--> 524 agt tcg tac aga cct tac tgc tgt gtc cac cag gga tgc ttt gct gct ttt aca ata cag
525 5100
526 Ser Ser Tyr Arg Pro Tyr Cys Cys Val His Gln Gly Cys Phe Ala Ala Phe Thr Ile Gln
527          1685          1690          1695          1700
E--> 530 caa aac ttg att ctt cat tac cag gct gta cat aaa tca aat ctt cct aca ttt tct gca
531 5160
532 Gln Asn Leu Ile Leu His Tyr Gln Ala Val His Lys Ser Asn Leu Pro Thr Phe Ser Ala
533          1705          1710          1715          1720
E--> 536 gag gtt caa gag gaa agt gaa gct gtt aaa gaa agt gaa gaa act gaa ccg aaa caa tca
537 5220
538 Glu Val Gln Glu Glu Ser Glu Ala Val Lys Glu Ser Glu Glu Thr Glu Pro Lys Gln Ser
539          1725          1730          1735          1740
E--> 542 atg aaa gaa ttt agg tgt cag gtg agt gac tgt tct agg att ttc caa gca att act ggc
543 5280
544 Met Lys Glu Phe Arg Cys Gln Val Ser Asp Cys Ser Arg Ile Phe Gln Ala Ile Thr Gly
545          1745          1750          1755          1760
E--> 548 cta ata cag cac tac atg aaa ctt cat gaa atg acc ccc gag gaa att gaa agc atg act
549 5340
550 Leu Ile Gln His Tyr Met Lys Leu His Glu Met Thr Pro Glu Glu Ile Glu Ser Met Thr
551          1765          1770          1775          1780
E--> 554 gct gct gtg gat gtt ggc aaa ttt cca tgt gat cag ttg gag tgt aag ttg tct ttt aca
555 5400
556 Ala Ala Val Asp Val Gly Lys Phe Pro Cys Asp Gln Leu Glu Cys Lys Leu Ser Phe Thr
557          1785          1790          1795          1800
E--> 560 aca tac ctg agc tat gtt gtt cat ctt gag gta gac cat gga att gga aca agg aca agt
561 5460
562 Thr Tyr Leu Ser Tyr Val Val His Leu Glu Val Asp His Gly Ile Gly Thr Arg Thr Ser
563          1805          1810          1815          1820
E--> 566 aag gca gaa gaa gat ggc ata tac aag tgt gac tgt gag ggc tgt gac agg ata tat gcc
567 5520
568 Lys Ala Glu Glu Asp Gly Ile Tyr Lys Cys Asp Cys Glu Gly Cys Asp Arg Ile Tyr Ala
569          1825          1830          1835          1840

```

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```

E--> 572 act cgg tct aat ctt ctc cga cac atc ttt aat aaa cat aat gac aag cat aaa gcc cat
573 5580
574 Thr Arg Ser Asn Leu Leu Arg His Ile Phe Asn Lys His Asn Asp Lys His Lys Ala His
575 1845 1850 1855 1860
E--> 578 ctg att cgg cca aga aaa tta act ggc cag gaa aat ata tca agt aag gca aac caa gaa
579 5640
580 Leu Ile Arg Pro Arg Lys Leu Thr Gly Gln Glu Asn Ile Ser Ser Lys Ala Asn Gln Glu
581 1865 1870 1875 1880
E--> 584 aaa tca aag tct aaa cat cgg aca aca aaa ccc aac aga tcc ggg aaa gac gga atg aaa
585 5700
586 Lys Ser Lys Ser Lys His Arg Thr Thr Lys Pro Asn Arg Ser Gly Lys Asp Gly Met Lys
587 1885 1890 1895 1900
E--> 590 atg cca aag aca aag cga aag aaa aaa agt aat tta gaa aac aag agc gca aaa gta gtg
591 5760
592 Met Pro Lys Thr Lys Arg Lys Lys Lys Ser Asn Leu Glu Asn Lys Ser Ala Lys Val Val
593 1905 1910 1915 1920
E--> 596 cag att gag gaa aat aag cct tat tct cta aag cgt ggg aag cac gtg tat tcc ata aag
597 5820
598 Gln Ile Glu Glu Asn Lys Pro Tyr Ser Leu Lys Arg Gly Lys His Val Tyr Ser Ile Lys
599 1925 1930 1935 1940
E--> 602 gct agg aat gat gcc ttg gca gag tgt aca agc aaa ttt gtg aca cag tat cca tgt atg
603 5880
604 Ala Arg Asn Asp Ala Leu Ala Glu Cys Thr Ser Lys Phe Val Thr Gln Tyr Pro Cys Met
605 1945 1950 1955 1960
E--> 608 ata aaa ggg tgt act tca gtc gtt aca agt gaa agc aat atc atc aga cat tat aag tgt
609 5940
610 Ile Lys Gly Cys Thr Ser Val Val Thr Ser Glu Ser Asn Ile Ile Arg His Tyr Lys Cys
611 1965 1970 1975 1980
E--> 614 cat aag ttg tcc agg gca ttt aca tca caa cac cgc aac att ctt att gtc ttt aag cga
615 6000
616 His Lys Leu Ser Arg Ala Phe Thr Ser Gln His Arg Asn Ile Leu Ile Val Phe Lys Arg
617 1985 1990 1995 2000
E--> 620 tat ggc aac cca caa gga agg gaa atc tct gag caa gaa gat gaa aag aat gat aag aaa
621 6060
622 Tyr Gly Asn Pro Gln Gly Arg Glu Ile Ser Glu Gln Glu Asp Glu Lys Asn Asp Lys Lys
623 2005 2010 2015 2020
E--> 626 ggt cct gat tca tct gtt tta gag aaa aat gat aac tcg gaa cca gct gct gct cca cag
627 6120
628 Gly Pro Asp Ser Ser Val Leu Glu Lys Asn Asp Asn Ser Glu Pro Ala Ala Ala Pro Gln
629 2025 2030 2035 2040
E--> 632 gaa gaa ggt aga aaa ggt gaa aag gat gag atg gat gag tta aca gaa tta ttt att aca
633 6180
634 Glu Glu Gly Arg Lys Gly Glu Lys Asp Glu Met Asp Glu Leu Thr Glu Leu Phe Ile Thr
635 2045 2050 2055 2060
E--> 638 aag tta ata aat gaa gac agc aca aat gca gaa aac caa ggc aat acc act tta aag gga
639 6240
640 Lys Leu Ile Asn Glu Asp Ser Thr Asn Ala Glu Asn Gln Gly Asn Thr Thr Leu Lys Gly
641 2065 2070 2075 2080
E--> 644 aat aac gaa ttt cag gag cat gat tcc tgc aca tca gaa aga caa aag cct ggt aat ttg

```

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645 6300  
646 Asn Asn Glu Phe Gln Glu His Asp Ser Cys Thr Ser Glu Arg Gln Lys Pro Gly Asn Leu  
647 2085 2090 2095 2100  
E--> 650 aag aga gtt tat aaa gaa aaa aac act gtg cag agt aag aaa cgg aag att gat aaa act  
651 6360  
652 Lys Arg Val Tyr Lys Glu Lys Asn Thr Val Gln Ser Lys Lys Arg Lys Ile Asp Lys Thr  
653 2105 2110 2115 2120  
E--> 656 gag cca gaa gta tcc ttg gtg gta aat aat aca cgg aaa gag gaa gag cct gcc gta gca  
657 6420  
658 Glu Pro Glu Val Ser Leu Val Val Asn Asn Thr Arg Lys Glu Glu Glu Pro Ala Val Ala  
659 2125 2130 2135 2140  
E--> 662 gtt cag acc act gag gag cat cct gca tcc ttt gac tgg agc tcc ttc aag cct atg gga  
663 6480  
664 Val Gln Thr Thr Glu Glu His Pro Ala Ser Phe Asp Trp Ser Ser Phe Lys Pro Met Gly  
665 2145 2150 2155 2160  
E--> 668 ttt gaa gca tcc ttt ctg aag ttt ctt gaa gag tct gca gtg aag cag aag aaa aat agt  
669 6540  
670 Phe Glu Ala Ser Phe Leu Lys Phe Leu Glu Glu Ser Ala Val Lys Gln Lys Lys Asn Ser  
671 2165 2170 2175 2180  
E--> 674 gac aga gac cat tca aac agt gga agt aaa aga gga tcc cat tcc agc tcc aga aga cat  
675 6600  
676 Asp Arg Asp His Ser Asn Ser Gly Ser Lys Arg Gly Ser His Ser Ser Ser Arg Arg His  
677 2185 2190 2195 2200  
E--> 680 gtt gat aag gct gct gtg gct ggt agc agt cat gtg tgt tcc tgt aaa gac agt gaa atc  
681 6660  
682 Val Asp Lys Ala Ala Val Ala Gly Ser Ser His Val Cys Ser Cys Lys Asp Ser Glu Ile  
683 2205 2210 2215 2220  
E--> 686 ttt gta cag ttt gcc aac ccc tca aag ctt cag tgc agt gag aat gta aaa att gtt tta  
687 6720  
688 Phe Val Gln Phe Ala Asn Pro Ser Lys Leu Gln Cys Ser Glu Asn Val Lys Ile Val Leu  
689 2225 2230 2235 2240  
E--> 691 gac aag act ctt aaa gat cgc tct gag ctt gtc cta aaa cag ctt cag gaa atg aaa cct  
692 6780  
693 Asp Lys Thr Leu Lys Asp Arg Ser Glu Leu Val Leu Lys Gln Leu Gln Glu Met Lys Pro  
694 2245 2250 2255 2260  
E--> 697 act gtc agt cta aaa aaa ctt gaa gta cta tcc aat agt cca gat agg act gtt tta aaa  
698 6840  
699 Thr Val Ser Leu Lys Lys Leu Glu Val Leu Ser Asn Ser Pro Asp Arg Thr Val Leu Lys  
700 2265 2270 2275 2280  
703 gaa atc agt ata ggt aaa gcc acg ggc aga ggg cag tac 6879  
704 Glu Ile Ser Ile Gly Lys Ala Thr Gly Arg Gly Gln Tyr  
705 2285 2290  
708 <210> SEQ ID NO: 2  
709 <211> LENGTH: 2293  
710 <212> TYPE: PRT  
711 <213> ORGANISM: Mus musculus  
E--> 713 <400> SEQUENCE: 1 2 ← replace  
714 Met Leu Tyr Asn Gln Pro Asp Gln Lys Tyr Asp Glu Glu Asn Leu Pro Ile Pro Asn Ser  
715 5 10 15 20

2293 (delete)  
number the  
amino acids  
under every  
amino acids

insert a  
hard return

Per 1.822 of sequence  
rules a MAXIMUM of  
16 amino acids per line 3/24/03

## RAW SEQUENCE LISTING

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TIME: 13:19:44

Input Set : N:\EBONY'S\EP.txt

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718	Leu	Arg	Cys	Glu	Leu	Leu	Leu	Val	Leu	Lys	Thr	Gln	Trp	Pro	Phe	Asp	Pro	Glu	Phe	Trp
719					25					30					35					40
722	Asp	Trp	Lys	Thr	Leu	Lys	Arg	Gln	Cys	Leu	Ala	Leu	Met	Gly	Glu	Glu	Ala	Ser	Ile	Val
723					45					50					55					60
725	Ser	Ser	Ile	Asp	Glu	Leu	Asn	Asp	Ser	Glu	Val	Tyr	Glu	Lys	Val	Asp	Tyr	Gln	Gly	Glu
726					65					70					75					80
728	Arg	Gly	Asp	Thr	Ser	Val	Asn	Gly	Leu	Ser	Ala	Ala	Gly	Leu	Gly	Thr	Asp	Ser	Gly	Leu
729					85					90					95					100
731	Leu	Met	Asp	Thr	Gly	Asp	Glu	Lys	Gln	Lys	Lys	Lys	Glu	Ile	Lys	Glu	Leu	Lys	Asp	Arg
732					105					110					115					120
734	Gly	Phe	Ile	Ser	Ala	Arg	Phe	Arg	Asn	Trp	Gln	Ala	Tyr	Met	Gln	Tyr	Cys	Leu	Leu	Cys
735					125					130					135					140
737	Asp	Lys	Glu	Phe	Leu	Gly	His	Arg	Ile	Val	Arg	His	Ala	Gln	Lys	His	Tyr	Lys	Asp	Gly
738					145					150					155					160
740	Ile	Tyr	Ser	Cys	Pro	Ile	Cys	Ala	Lys	Asn	Phe	Asn	Ser	Lys	Asp	Ser	Phe	Val	Pro	His
741					165					170					175					180
743	Val	Thr	Leu	His	Val	Lys	Gln	Ser	Ser	Lys	Glu	Arg	Leu	Ala	Ala	Met	Lys	Pro	Leu	Arg
744					185					190					195					200
746	Arg	Leu	Gly	Arg	Pro	Pro	Lys	Ile	Thr	Ala	Thr	His	Glu	Asn	Gln	Lys	Thr	Asn	Ile	Asn
747					205					210					215					220
749	Thr	Val	Ala	Lys	Gln	Glu	Gln	Arg	Pro	Ile	Lys	Lys	Asn	Ser	Leu	Tyr	Ser	Thr	Asp	Phe
750					225					230					235					240
752	Ile	Val	Phe	Asn	Asp	Asn	Asp	Gly	Ser	Asp	Asp	Glu	Asn	Asp	Asp	Lys	Asp	Lys	Ser	Tyr
753					245					250					255					260
755	Glu	Pro	Glu	Val	Ile	Pro	Val	Gln	Lys	Pro	Val	Pro	Val	Asn	Glu	Phe	Asn	Cys	Pro	Val
756					265					270					275					280
758	Thr	Phe	Cys	Lys	Lys	Gly	Phe	Lys	Tyr	Phe	Lys	Asn	Leu	Ile	Ala	His	Val	Lys	Gly	His
759					285					290					295					300
761	Lys	Asp	Ser	Glu	Asp	Ala	Lys	Arg	Phe	Leu	Glu	Met	Gln	Ser	Lys	Lys	Val	Ile	Cys	Gln
762					305					310					315					320
764	Tyr	Cys	Arg	Arg	His	Phe	Val	Ser	Val	Thr	His	Leu	Asn	Asp	His	Leu	Gln	Met	His	Cys
765					325					330					335					340
767	Gly	Ser	Lys	Pro	Tyr	Ile	Cys	Ile	Gln	Met	Lys	Cys	Lys	Ala	Gly	Phe	Asn	Ser	Tyr	Ala
768					345					350					355					360
770	Glu	Leu	Leu	Ala	His	Arg	Lys	Glu	His	Gln	Val	Phe	Arg	Ala	Lys	Cys	Leu	Phe	Pro	Lys
771					365					370					375					380
773	Cys	Gly	Arg	Ile	Phe	Ser	Gln	Ala	Tyr	Leu	Leu	Tyr	Asp	His	Glu	Ala	Gln	His	Tyr	Asn
774					385					390					395					400
776	Thr	Tyr	Thr	Cys	Lys	Phe	Thr	Gly	Cys	Gly	Lys	Val	Tyr	Arg	Ser	Gln	Ser	Glu	Met	Glu
777					405					410					415					420
779	Lys	His	Gln	Asp	Gly	His	Ser	His	Pro	Glu	Thr	Gly	Leu	Pro	Pro	Glu	Asp	Gln	Leu	Gln
780					425					430					435					440
782	Pro	Ser	Gly	Asn	Asp	Val	Asn	Pro	Asp	Ser	Gly	Ala	Thr	Ala	Ala	Gly	Gly	Arg	Ser	Glu
783					445					450					455					460
785	Asn	Ser	Ile	Asp	Lys	Asn	Leu	Gly	Ser	Asn	Arg	Ser	Ala	Asp	Trp	Glu	Lys	Asn	Arg	Ala
786					465					470					475					480
788	Glu	Pro	Ala	Val	Thr	Lys	His	Gly	Gln	Ile	Ser	Ala	Ala	Glu	Leu	Arg	Gln	Ala	Asn	Ile
789					485					490					495					500
791	Pro	Leu	Ser	Asn	Gly	Leu	Glu	Thr	Arg	Asp	Asn	Thr	Thr	Val	Leu	Arg	Thr	Asn	Glu	Val

*Edit the above*

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Input Set : N:\EBONY'S\EP.txt

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792					505					510					515				520	
794	Ala	Val	Ser	Ile	Lys	Val	Ser	Val	Asn	His	Gly	Val	Glu	Gly	Asp	Phe	Gly	Lys	Gln	Glu
795					525					530					535				540	
797	Asn	Leu	Thr	Met	Glu	Gly	Thr	Gly	Glu	Pro	Leu	Ile	Thr	Asp	Val	His	Lys	Pro	Gly	Ile
798					545					550					555				560	
800	Gly	Ala	Gly	Val	Gln	Leu	Cys	His	Pro	Gly	Phe	Gln	Glu	Lys	Lys	Gly	His	Glu	Cys	Leu
801					565					570					575				580	
803	Asn	Glu	Ala	Gln	Asn	Ser	Leu	Ser	Asn	Ser	Glu	Ser	Leu	Lys	Met	Asp	Asp	Leu	Asn	Pro
804					585					590					595				600	
806	Gln	Ser	Leu	Glu	Arg	Gln	Val	Asn	Thr	Leu	Met	Thr	Phe	Ser	Val	Gln	Asn	Glu	Ala	Gly
807					605					610					615				620	
809	Leu	Glu	Asp	Asn	Ser	Gln	Ile	Cys	Lys	Phe	Glu	Cys	Gly	Gly	Asp	Val	Lys	Thr	Ser	Ser
810					625					630					635				640	
812	Ser	Leu	Tyr	Asp	Leu	Pro	Leu	Lys	Thr	Leu	Glu	Ser	Ile	Thr	Phe	Val	Gln	Ser	Gln	Pro
813					645					650					655				660	
815	Asp	Leu	Ser	Ser	Pro	Leu	Gly	Ser	Pro	Ser	Val	Pro	Pro	Lys	Ala	Pro	Gly	Gln	Lys	Phe
816					665					670					675				680	
818	Ser	Cys	Gln	Val	Glu	Gly	Cys	Thr	Arg	Thr	Tyr	Asn	Ser	Ser	Gln	Ser	Ile	Gly	Lys	His
819					685					690					695				700	
821	Met	Lys	Thr	Ala	His	Pro	Asp	Gln	Tyr	Ala	Ala	Phe	Lys	Leu	Gln	Arg	Lys	Thr	Lys	Lys
822					705					710					715				720	
824	Gly	Gln	Lys	Ser	Asn	Asn	Leu	Asn	Thr	Pro	Asn	His	Gly	Lys	Cys	Val	Tyr	Phe	Leu	Pro
825					725					730					735				740	
827	Ser	Gln	Val	Ser	Ser	Ser	Asn	His	Ala	Phe	Phe	Thr	Pro	Gln	Thr	Lys	Ala	Asn	Gly	Asn
828					745					750					755				760	
830	Pro	Ala	Cys	Ser	Ala	Gln	Val	Gln	His	Val	Ser	Pro	Ser	Ile	Phe	Pro	Ala	His	Leu	Ala
831					765					770					775				780	
833	Ser	Val	Ser	Ala	Pro	Leu	Leu	Pro	Ser	Val	Glu	Ser	Val	Leu	Ser	Pro	Asn	Ile	Pro	Ser
834					785					790					795				800	
836	Gln	Asp	Lys	His	Gly	Gln	Asp	Gly	Ile	Leu	Cys	Ser	Gln	Met	Glu	Asn	Leu	Ser	Tyr	Ala
837					805					810					815				820	
839	Pro	Leu	Pro	Ala	Gln	Met	Glu	Asp	Leu	Thr	Lys	Thr	Val	Leu	Pro	Leu	Asn	Ile	Asp	Ser
840					825					830					835				840	
842	Gly	Ser	Asp	Pro	Phe	Leu	Pro	Leu	Pro	Thr	Glu	Asn	Ser	Ser	Leu	Phe	Ser	Ser	Pro	Ala
843					845					850					855				860	
845	Asp	Ser	Glu	Asn	Asn	Ser	Val	Phe	Ser	Gln	Leu	Glu	Asn	Ser	Thr	Asn	His	Tyr	Pro	Ser
846					865					870					875				880	
848	Gln	Thr	Asp	Gly	Asn	Ile	Asn	Ser	Ser	Phe	Leu	Lys	Gly	Gly	Ser	Ser	Glu	Asn	Gly	Val
849					885					890					895				900	
851	Phe	Pro	Ser	Gln	Val	Ser	Ser	Ala	Asp	Asp	Phe	Ser	Ser	Thr	Ser	Ala	Gln	Pro	Ser	Thr
852					905					910					915				920	
854	Pro	Lys	Lys	Val	Lys	Lys	Asp	Arg	Gly	Arg	Gly	Pro	Asn	Gly	Lys	Glu	Arg	Lys	Pro	Lys
855					925					930					935				940	
857	His	Asn	Lys	Arg	Ala	Lys	Trp	Pro	Ala	Ile	Ile	Arg	Asp	Gly	Lys	Phe	Ile	Cys	Ser	Arg
858					945					950					955				960	
860	Cys	Tyr	Arg	Ala	Phe	Thr	Asn	Pro	Arg	Ser	Leu	Gly	Gly	His	Leu	Ser	Lys	Arg	Ser	Tyr
861					965					970					975				980	
863	Cys	Lys	Pro	Leu	Asp	Gly	Ala	Glu	Ile	Ala	Gln	Glu	Leu	Leu	Gln	Thr	Asn	Arg	Gln	Pro
864					985					990					995				1000	



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Output Set: N:\CRF4\03242003\J032438.raw

866	Ser	Leu	Leu	Ala	Ser	Met	Ile	Leu	Ser	Thr	Ser	Ala	Val	Asn	Met	Gln	Gln	Pro	Gln	Gln
867					1005					1010					1015				1020	
869	Ser	Asn	Phe	Asn	Pro	Glu	Thr	Cys	Phe	Lys	Asp	Pro	Ser	Phe	Leu	Gln	Leu	Leu	Asn	Val
870					1025					1030					1035				1040	
872	Glu	Asn	Arg	Pro	Thr	Phe	Leu	Pro	Ser	Thr	Phe	Pro	Arg	Cys	Asp	Val	Ser	Asn	Phe	Asn
873					1045					1050					1055				1060	
875	Ala	Ser	Val	Ser	Gln	Glu	Gly	Ser	Glu	Ile	Ile	Lys	Gln	Ala	Leu	Glu	Thr	Ala	Gly	Ile
876					1065					1070					1075				1080	
878	Pro	Ser	Thr	Phe	Glu	Ser	Ala	Glu	Met	Leu	Ser	Gln	Val	Val	Pro	Ile	Gly	Ser	Val	Ser
879					1085					1090					1095				1100	
881	Asp	Ala	Ala	Gln	Val	Ser	Ala	Ala	Gly	Met	Pro	Gly	Pro	Pro	Val	Thr	Pro	Leu	Leu	Gln
882					1105					1110					1115				1120	
884	Thr	Val	Cys	His	Pro	Asn	Thr	Ser	Pro	Ser	Asn	Gln	Asn	Gln	Thr	Pro	Asn	Ser	Lys	Thr
885					1125					1130					1135				1140	
887	Leu	Lys	Glu	Cys	Asn	Ser	Leu	Pro	Leu	Phe	Thr	Thr	Asn	Asp	Leu	Leu	Leu	Lys	Thr	Ile
888					1145					1150					1155				1160	
890	Glu	Asn	Gly	Leu	Cys	Ser	Asn	Ser	Phe	Ser	Ser	Ser	Thr	Glu	Pro	Pro	Gln	Asn	Phe	Thr
891					1165					1170					1175				1180	
893	Asn	Asn	Ser	Ala	His	Val	Ser	Val	Ile	Ser	Gly	Pro	Gln	Asn	Thr	Arg	Ser	Ser	His	Leu
894					1185					1190					1195				1200	
896	Asn	Lys	Lys	Gly	Asn	Ser	Ala	Ser	Lys	Lys	Arg	Lys	Lys	Val	Ala	Pro	Ala	Val	Ser	Val
897					1205					1210					1215				1220	
899	Ser	Asn	Thr	Ser	Gln	Asn	Val	Leu	Pro	Thr	Asp	Leu	Pro	Val	Gly	Leu	Pro	Ser	Lys	Asn
900					1225					1230					1235				1240	
902	Leu	Thr	Val	Pro	Asp	Thr	Asn	Thr	Arg	Ser	Asp	Met	Thr	Pro	Asp	Cys	Glu	Pro	Arg	Ala
903					1245					1250					1255				1260	
905	Leu	Val	Glu	Asn	Leu	Thr	Gln	Lys	Leu	Asn	Asn	Ile	Asp	Asn	His	Leu	Phe	Ile	Thr	Asp
906					1265					1270					1275				1280	
908	Val	Lys	Glu	Asn	Cys	Lys	Ala	Ser	Leu	Glu	Pro	His	Thr	Met	Leu	Thr	Pro	Leu	Thr	Leu
909					1285					1290					1295				1300	
911	Lys	Thr	Glu	Asn	Gly	Asp	Ser	Arg	Met	Met	Pro	Leu	Ser	Ser	Cys	Thr	Pro	Val	Asn	Ser
912					1305					1310					1315				1320	
914	Asp	Leu	Gln	Ile	Ser	Glu	Asp	Asn	Val	Ile	Gln	Asn	Phe	Glu	Lys	Thr	Leu	Glu	Ile	Ile
915					1325					1330					1335				1340	
917	Lys	Thr	Ala	Met	Asn	Ser	Gln	Ile	Leu	Glu	Val	Lys	Ser	Gly	Ser	Gln	Gly	Thr	Gly	Glu
918					1345					1350					1355				1360	
920	Thr	Thr	Gln	Asn	Ala	Gln	Ile	Asn	Tyr	Ser	Met	Gln	Leu	Pro	Ser	Val	Asn	Ser	Ile	Pro
921					1365					1370					1375				1380	
923	Asp	Ser	Lys	Leu	Pro	Asp	Ala	Ser	Gln	Cys	Ser	Ser	Phe	Leu	Thr	Val	Met	Pro	Thr	Lys
924					1385					1390					1395				1400	
926	Ser	Glu	Ala	Leu	His	Lys	Glu	Asp	Gln	Ile	Gln	Asp	Ile	Leu	Glu	Gly	Leu	Gln	Asn	Leu
927					1405					1410					1415				1420	
929	Lys	Leu	Glu	Asn	Asp	Thr	Ser	Ala	Pro	Ala	Ser	Gln	Ser	Met	Leu	Met	Asn	Lys	Ser	Val
930					1425					1430					1435				1440	
932	Ala	Leu	Ser	Pro	Thr	Pro	Thr	Lys	Ser	Thr	Pro	Asn	Ile	Val	Val	Gln	Pro	Val	Pro	Glu
933					1445					1450					1455				1460	
935	Val	Ile	His	Val	Gln	Leu	Asn	Asp	Arg	Val	Asn	Lys	Pro	Phe	Val	Cys	Gln	Asn	Gln	Gly
936					1465					1470					1475				1480	
938	Cys	Asn	Tyr	Ser	Ala	Met	Thr	Lys	Asp	Ala	Leu	Phe	Lys	His	Tyr	Gly	Lys	Ile	His	Gln

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/032,438

DATE: 03/24/2003

TIME: 13:19:44

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

939		1485		1490		1495		1500
941	Tyr Thr Pro Glu Met Ile Leu Glu Ile Lys Lys Asn Gln Leu Lys Phe Ala Pro Phe Lys							
942		1505		1510		1515		1520
944	Cys Val Val Pro Ser Cys Thr Lys Thr Phe Thr Arg Asn Ser Asn Leu Arg Ala His Cys							
945		1525		1530		1535		1540
947	Gln Leu Val His His Phe Thr Ile Glu Glu Met Val Lys Leu Lys Ile Lys Arg Pro Tyr							
948		1545		1550		1555		1560
950	Gly Arg Lys Ser Gln Ser Glu Asn Leu Ser Ser Pro Gln Asn Asn Gln Val Lys Lys Gln							
951		1565		1570		1575		1580
953	Pro Ser Met Ala Glu Glu Thr Lys Thr Glu Ser Gln Pro Ala Phe Lys Val Pro Ala Ala							
954		1585		1590		1595		1600
956	Thr Gly Asp Ala Ala Leu Ala Asn Ala Thr Val Ile Pro Glu Lys Gln Leu Ala Glu Lys							
957		1605		1610		1615		1620
959	Lys Ser Pro Glu Lys Pro Glu Ser Ser Ser Gln Pro Val Thr Ser Ser Ala Glu Gln Tyr							
960		1625		1630		1635		1640
962	Asn Ala Asn Leu Ala Asn Leu Lys Thr Lys Gly Arg Lys Asn Lys Arg His Arg Lys Glu							
963		1645		1650		1655		1660
965	Lys Glu Glu Lys Arg Glu Lys Asn Pro Val Ser Gln Ala Phe Glu Leu Pro Thr Lys Tyr							
966		1665		1670		1675		1680
968	Ser Ser Tyr Arg Pro Tyr Cys Cys Val His Gln Gly Cys Phe Ala Ala Phe Thr Ile Gln							
969		1685		1690		1695		1700
971	Gln Asn Leu Ile Leu His Tyr Gln Ala Val His Lys Ser Asn Leu Pro Thr Phe Ser Ala							
972		1705		1710		1715		1720
974	Glu Val Gln Glu Glu Ser Glu Ala Val Lys Glu Ser Glu Glu Thr Glu Pro Lys Gln Ser							
975		1725		1730		1735		1740
977	Met Lys Glu Phe Arg Cys Gln Val Ser Asp Cys Ser Arg Ile Phe Gln Ala Ile Thr Gly							
978		1745		1750		1755		1760
980	Leu Ile Gln His Tyr Met Lys Leu His Glu Met Thr Pro Glu Glu Ile Glu Ser Met Thr							
981		1765		1770		1775		1780
983	Ala Ala Val Asp Val Gly Lys Phe Pro Cys Asp Gln Leu Glu Cys Lys Leu Ser Phe Thr							
984		1785		1790		1795		1800
986	Thr Tyr Leu Ser Tyr Val Val His Leu Glu Val Asp His Gly Ile Gly Thr Arg Thr Ser							
987		1805		1810		1815		1820
989	Lys Ala Glu Glu Asp Gly Ile Tyr Lys Cys Asp Cys Glu Gly Cys Asp Arg Ile Tyr Ala							
990		1825		1830		1835		1840
992	Thr Arg Ser Asn Leu Leu Arg His Ile Phe Asn Lys His Asn Asp Lys His Lys Ala His							
993		1845		1850		1855		1860
995	Leu Ile Arg Pro Arg Lys Leu Thr Gly Gln Glu Asn Ile Ser Ser Lys Ala Asn Gln Glu							
996		1865		1870		1875		1880
998	Lys Ser Lys Ser Lys His Arg Thr Thr Lys Pro Asn Arg Ser Gly Lys Asp Gly Met Lys							
999		1885		1890		1895		1900
1001	Met Pro Lys Thr Lys Arg Lys Lys Lys Ser Asn Leu Glu Asn Lys Ser Ala Lys Val Val							
1002		1905		1910		1915		1920
1004	Gln Ile Glu Glu Asn Lys Pro Tyr Ser Leu Lys Arg Gly Lys His Val Tyr Ser Ile Lys							
1005		1925		1930		1935		1940
1007	Ala Arg Asn Asp Ala Leu Ala Glu Cys Thr Ser Lys Phe Val Thr Gln Tyr Pro Cys Met							
1008		1945		1950		1955		1960
1010	Ile Lys Gly Cys Thr Ser Val Val Thr Ser Glu Ser Asn Ile Ile Arg His Tyr Lys Cys							
1011		1965		1970		1975		1980



## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/032,438

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Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

1013	His	Lys	Leu	Ser	Arg	Ala	Phe	Thr	Ser	Gln	His	Arg	Asn	Ile	Leu	Ile	Val	Phe	Lys	Arg
1014					1985					1990					1995				2000	
1016	Tyr	Gly	Asn	Pro	Gln	Gly	Arg	Glu	Ile	Ser	Glu	Gln	Glu	Asp	Glu	Lys	Asn	Asp	Lys	Lys
1017					2005					2010					2015				2020	
1019	Gly	Pro	Asp	Ser	Ser	Val	Leu	Glu	Lys	Asn	Asp	Asn	Ser	Glu	Pro	Ala	Ala	Ala	Pro	Gln
1020					2025					2030					2035				2040	
1022	Glu	Glu	Gly	Arg	Lys	Gly	Glu	Lys	Asp	Glu	Met	Asp	Glu	Leu	Thr	Glu	Leu	Phe	Ile	Thr
1023					2045					2050					2055				2060	
1025	Lys	Leu	Ile	Asn	Glu	Asp	Ser	Thr	Asn	Ala	Glu	Asn	Gln	Gly	Asn	Thr	Thr	Leu	Lys	Gly
1026					2065					2070					2075				2080	
1028	Asn	Asn	Glu	Phe	Gln	Glu	His	Asp	Ser	Cys	Thr	Ser	Glu	Arg	Gln	Lys	Pro	Gly	Asn	Leu
1029					2085					2090					2095				2100	
1031	Lys	Arg	Val	Tyr	Lys	Glu	Lys	Asn	Thr	Val	Gln	Ser	Lys	Lys	Arg	Lys	Ile	Asp	Lys	Thr
1032					2105					2110					2115				2120	
1034	Glu	Pro	Glu	Val	Ser	Leu	Val	Val	Asn	Asn	Thr	Arg	Lys	Glu	Glu	Glu	Pro	Ala	Val	Ala
1035					2125					2130					2135				2140	
1037	Val	Gln	Thr	Thr	Glu	Glu	His	Pro	Ala	Ser	Phe	Asp	Trp	Ser	Ser	Phe	Lys	Pro	Met	Gly
1038					2145					2150					2155				2160	
1040	Phe	Glu	Ala	Ser	Phe	Leu	Lys	Phe	Leu	Glu	Glu	Ser	Ala	Val	Lys	Gln	Lys	Lys	Asn	Ser
1041					2165					2170					2175				2180	
1043	Asp	Arg	Asp	His	Ser	Asn	Ser	Gly	Ser	Lys	Arg	Gly	Ser	His	Ser	Ser	Ser	Arg	Arg	His
1044					2185					2190					2195				2200	
1046	Val	Asp	Lys	Ala	Ala	Val	Ala	Gly	Ser	Ser	His	Val	Cys	Ser	Cys	Lys	Asp	Ser	Glu	Ile
1047					2205					2210					2215				2220	
1049	Phe	Val	Gln	Phe	Ala	Asn	Pro	Ser	Lys	Leu	Gln	Cys	Ser	Glu	Asn	Val	Lys	Ile	Val	Leu
1050					2225					2230					2235				2240	
1051	Asp	Lys	Thr	Leu	Lys	Asp	Arg	Ser	Glu	Leu	Val	Leu	Lys	Gln	Leu	Gln	Glu	Met	Lys	Pro
1052					2245					2250					2255				2260	
1054	Thr	Val	Ser	Leu	Lys	Lys	Leu	Glu	Val	Leu	Ser	Asn	Ser	Pro	Asp	Arg	Thr	Val	Leu	Lys
1055					2265					2270					2275				2280	
1057	Glu	Ile	Ser	Ile	Gly	Lys	Ala	Thr	Gly	Arg	Gly	Gln	Tyr							
1058					2285					2290										

~~2293~~ delete

edit



RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/032,438

DATE: 03/24/2003  
TIME: 13:19:45

Input Set : N:\EBONY'S\EP.txt  
Output Set: N:\CRF4\03242003\J032438.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 20,26,32,38,44,50,56,62,68,74,80,86,92,98,104,110,116,122  
Seq#:1; Line(s) 128,134,140,146,152,158,164,170,176,182,188,194,200,206,212  
Seq#:1; Line(s) 218,224,230,236,242,248,254,260,266,272,278,284,290,296,302  
Seq#:1; Line(s) 308,314,320,326,332,338,344,350,356,362,368,374,380,386,392  
Seq#:1; Line(s) 398,404,410,416,422,428,434,440,446,452,458,464,470,476,482  
Seq#:1; Line(s) 488,494,500,506,512,518,524,530,536,542,548,554,560,566,572  
Seq#:1; Line(s) 578,584,590,596,602,608,614,620,626,632,638,644,650,656,662  
Seq#:1; Line(s) 668,674,680,686,691,697

IMPORTANT

## VERIFICATION SUMMARY

DATE: 03/24/2003

PATENT APPLICATION: US/10/032,438

TIME: 13:19:45

Input Set : N:\EBONY'S\EP.txt

Output Set: N:\CRF4\03242003\J032438.raw

L:7 M:270 C: Current Application Number differs, Replaced Current Application No

L:7 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:20 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:1

M:254 Repeated in SeqNo=1

L:713 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:2 differs:1